WO 2005/029921 PCT/GB2004/003860

CLAIMS

1. A method of processing a parallel resistance heating cable, the cable comprising a heating element connected between at least two longitudinally extending conductors, the method comprising;

applying a current along at least one of said conductors, such that the surface temperature of the conductor is raised by ohmic heating to at least substantially the thermal transition point that allows plastic flow of the heating element.

- 2. A method as claimed in claim 1, wherein a current is applied along each of said conductors so as to raise the surface temperature of each conductor to at least substantially the thermal transition point of the heating element.
- 3. A method as claimed in claim 2, the method comprising connecting said conductors in series prior to applying said current.
- 4. A method as claimed in any one of the above claims, wherein said current is applied so as to elevate the surface of said conductor to a temperature greater than the thermal transition point of the heating element.
- 5. A method as claimed in any one of the above claims, wherein the current is applied for a time period of between 0.1 and 60 seconds.
- 6. A method as claimed in any one of the above claims, wherein the method further comprises the step of allowing the cable to cool to substantially ambient temperature after the application of said current.
- 7. A method as claimed in any one of the above claims, further comprising the step of monitoring the integrity of the bond between the conductors and the heating element by determining the resistance between the conductors when at least two different voltages are applied across the conductors.

WO 2005/029921 PCT/GB2004/003860

8. A method as claimed in any one of the above claims, the method further comprising the step of determining that the performance of the heating cable is less than optimum.

- 9. A method as claimed in any one of the above claims, wherein said method steps are performed whilst the heating cable is located in situ in a heating arrangement.
- 10. A method as claimed in any one of claims 1 to 8, wherein said current is applied to heat said conductor during the manufacture of the heating cable.
- 11. A method as claimed in any one of the above claims, wherein the heating element comprises a semiconductor.
- 12. A method as claimed in any one of the above claims, wherein the heating element comprises a polymeric matrix.
- 13. A heating cable processed by the method as claimed in any one of the above claims.
- 14. A method of processing a heating cable substantially as hereinbefore described with reference to Figures 1 to 4 of the accompanying drawings.
- 15. A heating cable processed by the method substantially as hereinbefore described with reference to Figures 1 to 4 of the accompanying drawings.